UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

Comments of Southern Company

DISPOSAL OF COAL COMBUSTION RESIDUALS FROM ELECTRIC UTILITIES; AMENDMENTS TO THE NATIONAL MINIMUM CRITERIA (PHASE ONE); PROPOSED RULE

83 Fed. Reg. 11,584 (March 15, 2018)

Docket ID No. EPA-HQ-OLEM-2017-0286

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TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

Southern Company appreciates the opportunity to offer comments in response to the Environmental Protection Agency's ("EPA" or the "Agency") March 15, 2018, Federal Register notice seeking public input regarding the Agency's proposed rulemaking to amend the Coal Combustion Residuals (CCR) Rule. Southern Company encourages EPA to consider the following:

- **Take quick action to finalize the rulemaking**: If EPA does not take final action on the matters in the proposed rulemaking by July 2018, some of the benefits of a more cost-effective, state-supervised regulatory program may be lost as deadlines under the existing rule draw near.
- **Allow adequate time for assessment monitoring activities**: EPA should extend the time allowed for activities in assessment monitoring to provide for a more robust assessment of corrective measures.
- **For non-CCR waste streams, EPA should either mirror the existing alternative closure provision for CCR or, at a minimum, include SERC-SE as a qualifying subregion**: We encourage EPA to act quickly to extend the alternative closure provision for non-CCR wastewater in a manner that (1) mirrors the existing provision for CCR and avoids referencing NERC regions and subregions or (2) includes SERC-SE. Failure to do so may present reliability consequences in a region such as SERC-SE that is moving proactively to discontinue use of unlined CCR impoundments.
- **Allow alternative performance standards**: The alternative performance standards proposed in this rulemaking will enable protective long-term coal ash management strategies that can be tailored to site-specific characteristics.
- **Promote beneficial use of CCR**: Southern Company supports the beneficial use of CCR, especially to expedite surface impoundment closure in a more safe and effective manner.

II. SOUTHERN COMPANY AND ITS INTERESTS

Southern Company appreciates the opportunity to offer comments in response to the EPA's March 15, 2018, Federal Register notice seeking public input regarding the Agency's proposed rulemaking to amend the CCR Rule. These comments are submitted on behalf of Southern Company and the following subsidiaries, which own and operate CCR disposal units: Alabama Power Company, Georgia Power Company, Gulf Power Company, and Mississippi Power Company. Southern Company is a member of the Utility Solid Waste Activities Group (USWAG) and endorses comments submitted by USWAG. Further, Southern Company endorses technical comments submitted by the Electric Power Research Institute (EPRI).

A. Promoting Constructive Regulations

Southern Company is America's premier energy company, with 46,000 megawatts of generating capacity and 1,500 billion cubic feet of annual combined natural gas use and throughput volume serving 9 million electric and gas utility customers through its subsidiaries. The company provides clean, safe, reliable and affordable energy through electric utilities in four states, natural gas distribution utilities in seven states, a wholesale generation company serving customers across America, and a nationally recognized provider of customized energy solutions.

As the Agency finalizes this proposed rulemaking, we believe that consideration of the following principles can lead to a practical and protective outcome: promoting constructive regulation, establishing regulatory certainty, promoting cooperative federalism, and basing solutions on realistic assessments of costs and benefits. We encourage the Agency to take its next steps quickly but carefully to minimize the regulatory uncertainty that may result in the near term.

B. Moving Forward on Coal Ash Management

When EPA first enacted CCR regulations in 2015,[1] it was precluded from approving state CCR programs in the manner typical of other programs, due to the unique structure of Subtitle D

[1] 80 Fed. Reg. 23,301 (Apr. 17, 2015).

of the Resource Conservation and Recovery Act (RCRA).[2] EPA also lacked direct enforcement authority. EPA explained at the time that the lack of direct regulatory oversight was the primary reason to impose measures beyond those that have been working for municipal solid waste landfills (MSWLFs) for decades.[3] However, in December 2016, as part of the Water Infrastructure Improvements for the Nation (WIIN) Act, Congress amended RCRA to authorize EPA to review and approve state CCR permit programs, or develop a federal permitting program where a state chooses not to participate, and to provide enforcement authority.[4]

Since then, EPA has supported states that seek a role in implementing the federal CCR standards. In April 2017, EPA distributed letters to state governors encouraging the development of state CCR permit programs authorized under section 2301 of the WIIN Act, which was "[b]ased on the concept of cooperative federalism that is a hallmark of our environmental laws."[5] EPA followed up with guidance for development and submission of state CCR programs.[6] We appreciate these efforts and encourage EPA to act on state submissions as expeditiously as possible.

As a critical component of WIIN Act implementation, Southern Company supports the allowance of alternative performance standards that are based on longstanding solid waste regulations. These standards are based on existing measures under Part 258 of EPA's own regulations. Part 258 has long governed MSWLFs which, unlike CCR units, may accept certain quantities of waste that EPA has found to be hazardous for purposes of RCRA. EPA's decades of experience implementing and overseeing these regulations provide ample assurance that state-supervised, risk-based solid waste disposal programs are safe, effective, and protective of human health and the environment. In the meantime, after several years of experience under a self-

[2] 42 U.S.C. §§ 6941-6949a.

[3] 80 Fed. Reg. at 21,333.

[4] Pub. L. No. 114-322, § 2301, 130 Stat. 1628, 1736-40 (Dec. 16, 2016).

[5] Letter from E. Scott Pruit, Administrator, EPA, to Kay Ivey, Governor of Alabama (Apr. 28, 2017).

[6] EPA, Office of Land and Emergency Management, Coal Combustion Residuals State Permit Program Guidance Document, Interim Final (Aug. 2017); *see also* Release of Interim Final Guidance for State Coal Combustion Residuals Permit Programs, 82 Fed. Reg. 38,685 (Aug. 15, 2017).

implementing CCR rule supported by utility certifications, there is every indication that utilities are maintaining compliance and will continue to do so.

III. QUICK ACTION IS NEEDED ON TIME-SENSITIVE ELEMENTS OF THE CCR PROGRAM.

If EPA does not take final action on the matters in the proposed rulemaking by July 2018, some of the benefits of a more flexible, cost-effective, and state-supervised regulatory program may be lost as deadlines under the existing rule draw nearer. We understand that the current rulemaking covers a broad range of issues. Should EPA find it impossible to take final action on all of them within the timetable we suggest, we encourage the Agency to consider addressing four discrete items for quicker action in a separate final rule. As explained further below, we recommend prompt action to (1) address timelines for the groundwater monitoring process and location restriction determinations; (2) authorize the use of professional engineer (P.E.) certifications; (3) extend timelines to allow meaningful state implementation; and (4) revise the alternative capacity language.

A. Allow Sufficient Time to Implement Measures Under Consideration in This Rulemaking.

Some of the proposals before the Agency will be of no practical value if they are not implemented by July 2018. We urge EPA to finalize this rulemaking for elements that are time-sensitive. We also refer EPA to USWAG's comments identifying critical upcoming milestones (evaluating Appendix IV groundwater data for exceedances of applicable protection standards as well as the October 2018 deadlines for location restrictions determinations) and their impacts to successful WIIN Act implementation. Upcoming milestones introduce near-term activities and decisions that will impact the long-term disposition of coal ash on a site-by-site basis (e.g., establishing groundwater protection standards, delineating impacts, and performing assessments of corrective measures). It will be difficult to proceed into these phases of CCR rule implementation under the existing regulatory uncertainty. We urge EPA to recognize this dilemma and take immediate action to clarify groundwater monitoring timelines and address location restriction requirements.

B. Allow Time for Meaningful Implementation of the WIIN Act.

In the preamble to the existing rule, EPA expressed concern about the lack of direct regulatory oversight under RCRA Subtitle D as the main reason to impose measures beyond those already in place for MSWLFs. Congress responded by authorizing EPA to approve state CCR programs and to implement its own permitting programs in non-participating states, backed by direct enforcement authority for EPA. EPA now has the opportunity to implement and oversee CCR measures that are more effective on an absolute basis as well as more cost-effective compared to the existing rule. However, some of the potential benefits will be lost if EPA does not allow reasonable time for states and EPA to implement permitting programs as contemplated under the WIIN Act.

In response, we encourage quick action on two items. First, EPA should allow the immediate implementation of alternative performance standards, including the use of P.E. certifications. EPA now has three years of experience implementing the CCR program in reliance on P.E. certifications. The combination of a P.E. staking his or her license on the accuracy of the certified material and the federal enforcement authority provided under the WIIN Act provide a more than adequate basis to assure compliance.

Second, EPA should allow sufficient time for states to follow the typical and legally necessary procedures that are required to implement CCR regulatory programs. For most if not all facilities in Southern Company's retail electricity footprint, we anticipate relying on P.E. certifications only as an interim bridge until states assume oversight. However, state programs take time to materialize. In response to requirements of both federal and state law, state agencies must follow a series of procedures, including public notice and an opportunity for public comment. Once a CCR program is final under state law, EPA approval is required. Even then, where the result is a permitting program, the regulated community must submit permit applications, and state agencies must consider the information submitted and approve, modify, or disapprove the permit. If states are to have a meaningful voice in how best to address existing surface impoundments and other CCR disposal units, they must be provided the time to implement these necessary procedures.

EPA should act now to provide timetables that build in time for state action before critical decisions regarding long-term coal ash management are fully committed. These

decisions—such as selection of a corrective action remedy or the pond closure option for the site—could be substantively influenced by alternative performance standards (e.g., alternative points of compliance, modifications to corrective action remedies, or implementation of alternative groundwater protection standards) proposed in this rulemaking.

C. For Non-CCR Waste Streams, EPA Should Mirror the Existing Alternative Closure Provision for CCR or, at a Minimum, Include SERC-SE as a Qualifying Subregion.

We encourage EPA to act quickly to extend the alternative closure provision for non-CCR wastewater in a manner that (1) mirrors the existing provision for CCR and avoids referencing NERC regions and subregions or (2) includes SERC-SE. Failure to do so may present reliability consequences in a region such as SERC-SE that is moving proactively to discontinue use of unlined CCR impoundments. The existing CCR rule's original timelines do not allow sufficient time to design, bid, construct, test, and calibrate wastewater treatment facilities. If those facilities are not ready in time, the facility will have limited compliance options, such as the installation of one or more portable treatment systems until construction of the permanent system is complete or even temporary cessation of plant operations. Such extreme responses are not necessary for the protection of health and the environment.

IV. EPA SHOULD ALLOW ADEQUATE TIME FOR ASSESSMENT MONITORING ACTIVITIES.

Southern Company endorses USWAG's comments regarding the need to address upcoming assessment monitoring and location restriction determination deadlines. EPA should also allow sufficient time - up to 180 days - for the investigations required by § 257.95(g). The time allowed to gather and analyze all the information necessary to assess corrective measures is only 90 days. That is an unreasonably short deadline for those tasks, particularly considering the acreage and complexity associated with many CCR facilities. This section of the rule outlines a sequence of events to be conducted should an Appendix IV constituent show a statistically significant exceedance of a groundwater protection standard. The rule's existing provisions require the utility to install additional monitoring wells to delineate groundwater conditions, collect data on the nature and estimated quantity of material released, install at least one well at

the property boundary, and sample all new wells to characterize the nature and extent of any potential release. The extent of the investigation must be sufficient to inform the assessment of corrective measures. That assessment, in turn, must be robust enough to inform the multitude of factors that must be considered to select a remedy (see § 257.97). EPA should extend the period for this investigation to 180 days to allow sufficient time to assess corrective measures.

V. SOUTHERN COMPANY SUPPORTS ALTERNATIVE GROUNDWATER PROTECTION STANDARDS AND ALTERNATIVE POINTS OF COMPLIANCE.

In addition to Southern Company's overall support for alternative performance standards, we offer additional comment on, and strongly support, alternative groundwater protection standards and alternative points of compliance. In the absence of alternative groundwater protection standards, the current rule requires closing and remediating CCR units because of statistical exceedances over background concentrations for constituents that do not have a maximum contaminant level (MCL). Establishing an alternative standard provides the opportunity to tailor responses in a manner that specifically accounts for that constituent and protects human health and the environment.

Southern Company also strongly supports the ability to establish alternate points of compliance at a distance from the CCR unit boundary. The requirement to monitor at the CCR unit boundary can physically complicate implementation of certain remedial measures, such as permeable reactive barriers, slurry walls, *in situ* stabilization and solidification, and other subsurface controls that should be installed or implemented at the waste boundary. Further, groundwater quality can be affected by land disturbing activities either through increased turbidity or other physical or geochemical influences. Pond closure activities can influence CCR unit boundary monitoring well results, resulting in statistical false positives. Ultimately, monitoring at a distance from the CCR unit boundary ensures that more accurate results are obtained during the phase of significant closure activities and corrective action implementation. The ability to obtain quality monitoring results while undertaking closure and corrective action reduces the probability of adverse impacts to human health and the environment.

VI. FOR NON-CCR WASTE STREAMS, EPA SHOULD MIRROR THE EXISTING ALTERNATIVE CLOSURE PROVISION FOR CCR OR, AT A MINIMUM, INCLUDE SERC-SE AS A QUALIFYING SUBREGION.

Southern Company appreciates EPA's effort to accommodate non-CCR waste stream management through the addition of an alternative closure provision applicable to non-CCR waste streams as a step in the right direction.[7] In its final rule, however, EPA should simply mirror the alternative closure provisions for CCR by eliminating the NERC region requirement. However, if EPA decides to impose reliability criteria in order to qualify for the alternative closure provision for non-CCR waste streams, then EPA must include the SERC-SE subregion. As currently proposed, facilities in SERC-SE and other regions that have acted proactively to divert CCR waste streams from impoundments and may not need the existing alternative closure provision for CCR (but may still need additional time to divert non-CCR waste streams) are held to a higher standard. The following discussion presents the challenges of diverting non-CCR waste streams from impoundments, why the existing 6-month period to cease placement of CCR and non-CCR waste streams is inadequate and why the EEI report supports inclusion of SERC-SE.

A. EPA Should Mirror the Alternative Closure Provisions for CCR for the Non-CCR Waste Streams.

Rather than adding different qualifications for non-CCR waste streams, EPA should simply mirror the alternative closure provisions for CCR. Additional requirements are not supported for waste streams that are not regulated under the existing rule. Instead, non-CCR waste streams should be subject to the same requirements as CCR waste streams. EPA is charged with protecting the environment, and if an alternative closure provision is protective in one NERC region, it should be protective in all the regions. Congress did not intend for EPA to evaluate whether a sustained loss of power will occur. Instead, those decisions are explicitly delegated to other federal agencies. Therefore, EPA should avoid imposing regulations that threaten a sustained loss of power to the community and should eliminate the regional reliability need as a requirement to meet the alternative closure provision for non-CCR waste streams.

[7] Southern Company's comments on the alternative closure provision for non-CCR waste streams also apply to the proposed alternative closure provision for permanent cessation of a coal-fired boiler.

However, if EPA decides to impose reliability criteria in order to qualify for the alternative closure provision for non-CCR waste streams, then EPA must include the SERC-SE subregion.

B. Requiring the Placement of CCR and Non-CCR Waste Streams into Impoundments to Cease Within Six Months Is Not Practical.

EPA stated in the preamble to the existing rule, "It is well established that the law cannot compel actions that are physically impossible … and it is incumbent on EPA to develop a regulation that does not in essence establish such a standard."[8] However, by not extending the alternative closure provision for non-CCR waste streams to all regions and facilities that require additional time to complete these activities, EPA has proposed such a standard.

EPA clearly recognizes in this proposed rulemaking the CCR rule's "comprehensive system of groundwater monitoring and corrective action," which allows facilities to "detect and address groundwater releases."[9] Through this prescriptive process, the exceedance of an established groundwater protection standard is the trigger for unlined impoundment closure and the starting point for the six-month period to cease placement of both CCR and non-CCR waste streams in the unit. In a typical state, the process to modify a major wastewater discharge permit as required to reroute non-CCR waste water streams can take more than a year to complete. To supplement EPA's understanding of the complexities and size of projects required to divert non-CCR waste streams from impoundments and the need for an alternative closure provision for non-CCR waste streams, Southern Company presents two different examples which reflect the wide range of factors typically encountered across the Southern Company generating fleet.

1. Plant A Example – Simple Project Takes 18 Months to Remove Non-CCR Waste Streams from the Surface Impoundment.

Plant A is a coal-fired unit which now uses natural gas as the primary fuel but still has an active CCR impoundment on site. Due to the fuel switch, CCR and associated sluice water is no longer being sent to the CCR impoundment. Additionally, this site does not utilize any flue gas desulfurization (FGD) equipment and, therefore, does not have an FGD waste water stream. After the switch to natural gas as the primary fuel, the site is left with 9 non-CCR waste streams

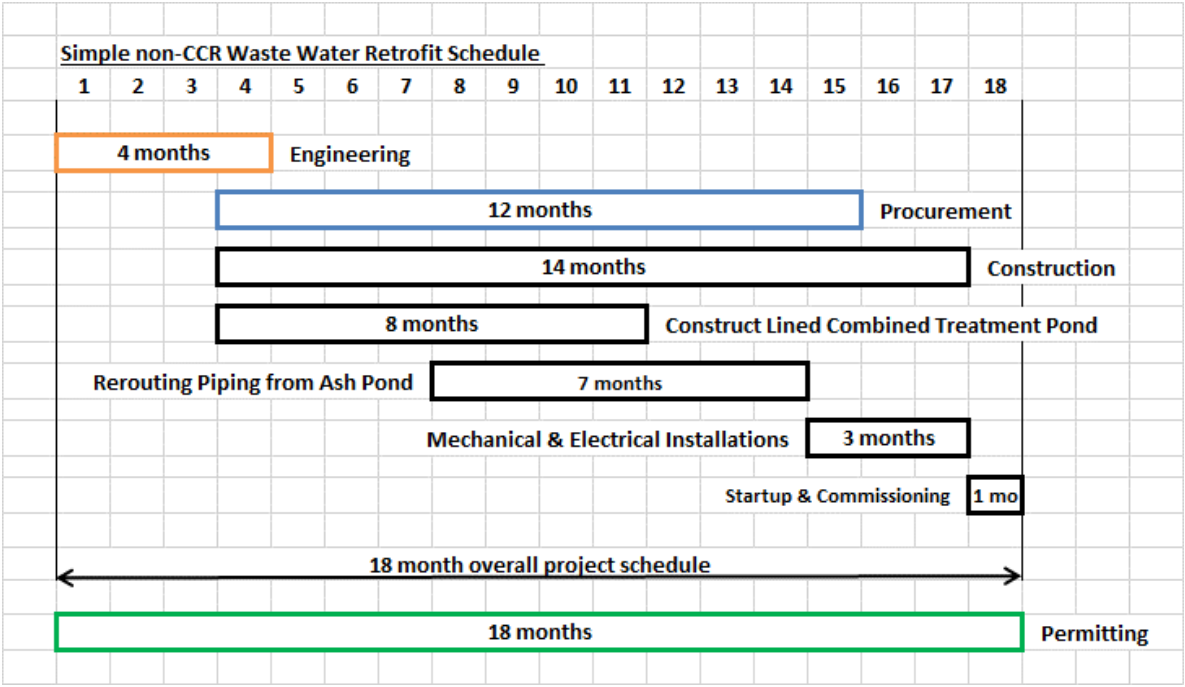
[8] 80 Fed. Reg. at 21,420.

[9] 83 Fed. Reg. 11,584, 11,588 (Mar. 15, 2018).

that will need to be re-routed to fully disconnect the plant from the existing CCR impoundment. This site will utilize a lined, combined treatment pond which relies on gravity and residence time to settle suspended solids. The combined treatment pond will allow the use of chemical additives in the event additional treatment is required prior to discharge. The overall duration for this project is approximately 18 months. Because this site does not provide base load generation, there is minimal impact to project timing due to planned unit outages to install the piping re-routes and associated mechanical and electrical connections.

Because Plant A has fewer streams to re-route, operates intermittently, and has straightforward low volume waste steams (i.e., technically definable in terms of quantity and quality), it is one of the simpler non-CCR waste projects to implement. However, even one of the simplest projects to implement still has an overall duration (18 months) that is three times the 6-month duration provided for by the existing CCR rule.

Figure 1. Wastewater Conversion Plant A – Simple Site



2. Plant B Example – Complex Project Takes 36 months to Remove Non-CCR Waste Streams from the Surface Impoundment.

Plant B, a four-unit coal plant, represents a significantly more complex project and corresponding equipment scope. The current water balance indicates there are over 50 non-CCR

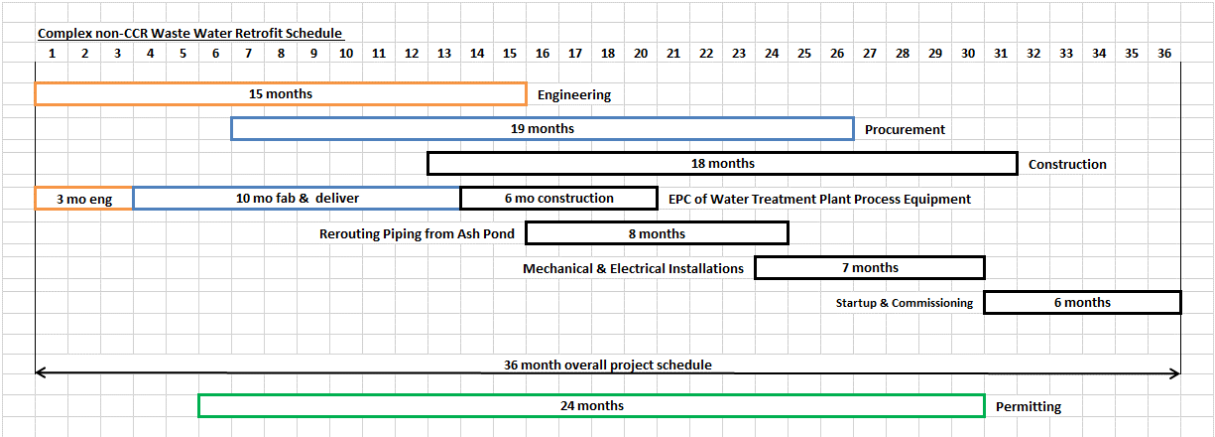
individual waste streams which go to the CCR impoundment. Additionally, each unit utilizes an FGD that produces a waste stream, which also goes to the CCR impoundment. The FGD waste water stream has the most complex water chemistry and variability of any water stream in the plant.

Projects are currently underway for all units which will allow fly ash and bottom ash to be handled dry. Therefore, the CCR and associated sluice water will be removed from the CCR impoundment once the retrofits are completed. The water treatment technology selected will utilize ballasted clarifiers, and associated equipment, to remove suspended solids and settling tanks with mechanical means for continuous removal of solid material which has been removed from the incoming water. Polymer or chemicals or both can be added to the clarifier if additional treatment is needed. The term "ballasted" refers to the fact that solids within the clarifier are continuously suspended to increase contact surface area and enhance performance.

Plant B is a complex project in terms of the number of streams to re-route, its more consistent operation (and scheduled outages), and its complex water chemistry associated with several of the non-CCR waste streams. Additionally, the large number of streams to deal with, some of which only flow intermittently, further complicates the process design of what treatment system is needed. The overall duration for this project is approximately 36 months due to the extensive equipment and construction scope when compared to a relatively simple combined treatment pond. The water treatment process equipment alone requires a schedule of 13 months to procure, fabricate, and deliver to the plant site (excluding construction). When these efforts are properly stacked and staggered consistent with accepted engineering and project management practice, the overall duration is approximately 36 months – nearly six times longer in duration than currently provided for in the existing CCR rule.

In both examples discussed above, there is also inadequate time for proper start-up and commissioning. Reports from industry indicate that it can take several months to properly tune and commission a large water treatment plant. The six months currently proposed in the existing rule is, at best, barely adequate to properly tune a complex wastewater treatment plant to steady state operation accounting for quantity and quality variations in the non-CCR water streams.

Figure 2. Wastewater Conversion Plant B – Complex Site



C. The EEI Study Shows Unacceptable Reliability Consequences for Multiple Regions and Sub-regions, Including SERC-SE.

EPA relies on a study prepared by EEI for the proposition that EPA's regulations threaten electric reliability only in specific reliability subregions.[10] EPA's proposed rule then limits the availability of the non-CCR waste water capacity demonstration to a few subregions, without including SERC-SE. However, the EEI study shows that the potential reserve margin in SERC-SE would fall below its published target planning reserve margin. To maintain adequate reliability, a utility must have reserve generating capacity which exceeds the normal-weather forecasted peak load. With less than optimal reserve margin levels, the reliability costs, including the cost of customer outages (i.e. load shed) and reliability purchases (*if available*), are both high and widely variable.

The EEI study potentially *underestimates* impacts to reliability. First, resource adequacy assessments are a comparison of available generation capacity to the load being served and assume that all generation is deliverable in large quantities from any point to any other point (i.e., not restricted in anyway by the transmission system). The transmission system, while robust, does not provide unrestricted delivery of generation, and physical location of generation in relation to load is a key factor in the reliable delivery using the available transmission system.

[10] EEI, Potential Electric Reliability Risks Due to Cessation of Power Generation as a Result of the Closure of Unlined Surface Impoundments Under 40 CFR Part 257.101 for the Failure to Meet Groundwater Protection Standards (2017).

Second, it is incorrect to assume that all generators physically located in the footprint have procured firm physical transmission service and could therefore reliably supply up to its rated MW output as a result of firm physical transmission service. Third, EEI did not consider seasonal impacts (especially winter) which can have a significant impact on reliability risk evaluations due to the potential lack of firm transmission or fuel transportation.

For an alternative closure provision, EPA should avoid imposing regulations that threaten a sustained loss of power to the community. However, if EPA decides to impose reliability criteria in order to qualify for the alternative closure provision for non-CCR wastewaters, then EPA must include those regions and sub-regions (including SERC-SE) whose potential reserve margins fall anywhere below the subregions' published target planning reserve margins in the EEI study.

D. The Proposed Definition of "Alternative Disposal Capacity" for Non-CCR Waste Streams Is Overly Simplistic.

EPA is proposing to add a definition of alternative capacity for the new § 257.103(b) as a basis for qualifying for the exemption and has solicited comment on this approach and on the definition of capacity. A capacity criterion should not be added to qualify for the exemption, because the exemption for non-CCR waste streams should mirror the exemption for CCR. If, however, EPA does add a definition of capacity, EPA must consider hydraulic capacity, effluent capacity, and transient operations for reasons described below.

As currently configured, the CCR impoundment provides sufficient capacity to treat non-CCR waste streams both hydraulically and to meet current NPDES effluent permit limits. Finding a replacement for this "capacity" is no simple task. We briefly discuss below the criteria that "capacity" must include in order to accurately reflect the tasks necessary to source new wastewater treatment capacity.

- **Hydraulic capacity:** Any new equipment, technology, or process would need to be able to have the hydraulic capacity to treat the entire flow of individual or combinations of non-CCR waste stream to allow the generating unit to continue to operate to serve the instantaneous customer demand for electricity. The hydraulic capacity should consider normal variations in non-CCR waste stream flows due to factors such as: number of

generating units in service; ambient weather conditions and seasonal variation; level of treatment system redundancy; and upset/malfunction of equipment which may be upstream of the non-CCR waste stream treatment devices.

- **Effluent capacity:** There is a wide variation in the constituents in many of the major non-CCR waste streams, which makes design and operation for sufficient capacity difficult. Because insufficient effluent capacity would have the same outfall quality impact as limiting the hydraulic capacity, it is imperative that sufficient time be provided to quantify a reasonable range of potential constituents as a function of operational and seasonal changes, while considering other challenges such as modifying plant operational procedures.

- **Transient operations:** Any definition of non-CCR waste stream capacity should consider transient, non-steady state conditions. Capacity may have to include surge volume, as required, to normalize off-design operation flows for treatment.

To be clear, EPA should not define or limit "capacity" in proposed § 257.103(b) or (d)(1) but instead should mirror the CCR exemptions for alternative closure provision in § 257.103(a) and (b) of the current rule. If EPA does define "capacity" for non-CCR waste streams alternative closure provision, EPA's proposed definition is not adequate and should be changed to account for hydraulic capacity, effluent capacity, and transient operations as described above. In other words, if a facility cannot find capacity that meets at least these criteria for the volume and collective waste streams, the facility should qualify for the alternative closure provision for non-CCR waste streams.

E. Requiring a Demonstration for Each Non-CCR Waste Stream is Impractical and Does Not Account for the Operational Realities.

EPA is considering adding a condition requiring the facility to demonstrate that it lacks alternative capacity for each waste stream that continues to be managed under the alternative closure provisions and seeks comment on the proposed regulatory text. Making a lack of capacity demonstration on each individual stream is not practical and EPA should not require such a demonstration. As shown above, a more complex project would typically have 50 or more individual non-CCR waste streams. Requiring individual demonstrations for 50 or more

non-CCR waste streams is not practical. In addition, while each of these streams are considered individually in water balance to determine the overall characteristics of the stream, it is typical for these streams to be consolidated at collection points as they flow toward the CCR impoundment. Additionally, in most cases, the non-CCR waste stream process equipment is a common installation applicable to many of the individual waste streams which have been consolidated. Much of the stream reconfiguration effort is toward combining and routing individual streams to a common treatment plant. Therefore, demonstrating a capacity need for individual streams does not make practical sense.

F. The Proposed Time to Construct Alternative Capacity is Adequate.

Southern Company supports the 5-year maximum extension timeframe set forth in the proposed rule for the alternative closure provision for non-CCR waste streams.

VII. EPA SHOULD REVISE THE DEFINITION OF NON-GROUNDWATER RELEASES.

EPA is proposing to establish a subset of the corrective action procedures currently found in §§ 257.96-257.98 that would apply to non-groundwater releases that can be completely remediated within 180 days from the time of detection. Under these modified procedures, EPA would compress the reporting requirements into two steps: the initial notification of a release and the documentation that the release has been remediated. We support the overall intent of this proposal, which we interpret is to facilitate expeditious response for non-groundwater releases that are expected to have limited potential for harm to human health and the environment. However, as we explain below, we find limited value in defining such releases to capture routine events or other releases that may not require corrective action.

A. The Proposed Definition of Non-Groundwater Release Is Overly Broad and Captures Routine Events.

Overall, this proposed provision has the positive intent of limiting the required response actions for minor non-groundwater releases and expediting the response time for more serious releases. However, the proposed language has the negative impact of defining non-groundwater releases to include those which either do not warrant corrective action (because they are a normal

part of routine operations, are otherwise permitted or are not traditionally considered a release) or that would take far greater than 180 days to correct. Whether 180 days is the appropriate timeframe in which an owner/operator would be expected to complete remediation of a non-groundwater release under this proposed provision depends upon how non-groundwater releases are ultimately defined.

In the proposal, EPA defines non-groundwater releases as:

> …releases from the CCR unit other than the releases directly to the groundwater that are detected through the unit's groundwater monitoring system. Examples of non-groundwater releases include seepage through the embankment, minor ponding of seepage at the toe of the embankment of the CCR unit, seepage at the abutments of the CCR unit, seepage from slopes, ponding at the toe of the unit, a release of fugitive dust and releases of a "catastrophic" nature such as the release of CCR materials from CCR surface impoundments from the Tennessee Valley Authority's (TVA) Kingston Fossil Plant in Harriman, TN and the Duke Energy Dan River Steam Station in Eden, NC.[11]

At least 5 of these examples (seepage through the embankment, minor ponding of seepage at the toe of the embankment, seepage at the abutments of the CCR unit, seepage from slopes and ponding at the toe of the unit) are potentially redundant and, more importantly, may not be indicative of a "release" from a CCR unit requiring corrective action. There are many instances where impoundment embankments are designed to drain rainwater that never contacts CCR for stability purposes, but may be considered under EPA's proposed definition as "seepage." Similarly, minor ponding of rainwater at the toe of embankments would also be considered a non-groundwater release under this definition, but such a condition may not indicate seepage or a release, particularly after precipitation. These kinds of events do not establish any issue of concern with respect to structural integrity or environmental quality. It would be costly and overly burdensome to subject non-CCR releases (e.g., rainwater ponding) or permitted discharges to notifications or corrective action requirements. Further, in the absence of

[11] 83 Fed. Reg. at 11,611 (proposed definition at § 257.53).

any reasonable prospect of harm to human health or the environment, EPA's authority to impose new requirements under RCRA is unclear.[12]

Given that EPA expects that these releases will typically be detected by qualified personnel or qualified professional engineers during periodic inspections, and that they may indicate concerns regarding structural stability, it seems advisable to allow the qualified professional engineer a degree of discretion in identifying these types of non-groundwater releases. If a specific definition is needed at all, an alternative definition of a non-groundwater release may be:

> "Releases that are *not* detected through routine groundwater monitoring, but are detected during routine structural integrity inspections by qualified professionals as those that may pose a structural stability concern."

It is, however, recommended that there be more guidance as to what is *not* a non-groundwater release. We suggest that the following would not be considered non-groundwater releases which would be subject to notification or corrective action:

- A release to groundwater detected through the groundwater monitoring system subject to 257.90.
- A permitted release subject to NPDES.
- Minor seepage or ponding that does not indicate a structural stability concern, as addressed in routine inspections.
- Fugitive dust subject to requirements of 257.80. (Coverage of fugitive dust under this provision is unnecessarily duplicative of the existing requirements at § 257.80.)

[12] It should also be noted that the catastrophic failures referenced in the proposed definition of "non-groundwater release" (Kingston and Dan River) occurred without this proposal on the books. EPA and the state agencies had adequate authority to address those situations without this proposed regulation. Stated differently, there is no support in the administrative record for any need to impose these provisions to address catastrophic releases.

B. The Timeframe for Remediation Shows the Lack of Impact to Human Health and the Environment.

For non-groundwater releases expected to have minimal impact to human health and the environment, a 180-day period for corrective action may be appropriate. If a "release" is such that it is cured within 180 days, that likely amounts to a matter of minor operation and maintenance that is fully contained on plant property. In that scenario, there is no harm to human health or the environment, and public notice is unlikely warranted. Practices occurring at sites that have potential to affect public exposures and groundwater are already addressed through existing rule requirements under §§ 257.80 and 257.90. Dusting with potential off-site impacts are addressed under § 257.80. EPA should not duplicate existing provisions that apply to fugitive dust or groundwater concerns in this section or their requirement for public interface and notifications.

VIII. EPA SHOULD PROMOTE AND BROADEN OPPORTUNITIES FOR BENEFICIAL USE OF CCR FOR CLOSURE ACTIVITIES.

EPA is proposing to broaden existing beneficial use opportunities for CCR for purposes of CCR unit closure. Currently, according to EPA guidance:

> EPA would consider multiple impoundments that operate in a series to be a single "multi-unit system," and would consider the entire multi-unit system to be one CCR unit for purposes of closure. As a consequence, the pumping of the wastewaters from the first impoundment into subsequent impoundments that are configured in a series would be better characterized as the movement of waste within a disposal unit, which is generally not regulated under RCRA….[13]
>
> As a designated single CCR unit, however, the movement of CCR and other wastes between the individual units that make up that system would be permissible throughout the closure period during closure activities under 40 CFR section 257.101(a)(1); as noted previously, the movement of waste within a unit is generally not

[13] EPA, Frequent Questions on the Implementation of the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities Final Rule, 17-18 (Nov. 2, 2017), available at www.epa.gov/sites/production/files/2017-05/documents/frequent_questions_on_the_implementation_of_the_ccr_final_rule_full_list.pdf.

> considered to be the "placement" of waste into a unit. For example, movement of CCR between impoundments within the multiunit system to facilitate CCR dewatering and removal activities, even after the 6-month period would be permissible under this closure approach. Similarly, the continued pumping of the wastewaters through the multi-CCR unit system toward the NPDES-permitted outfall during closure (e.g., generated by precipitation or the release of interstitial water during CCR excavation) would also not be inconsistent with the placement prohibition under 40 CFR section 257.101(a)(1).

We conclude that what EPA is proposing in this rulemaking addresses situations that are not contemplated through this longstanding interpretation – that is, the addition of CCR or other wastes from locations *external* to the multi-unit system.

Southern Company recommends that EPA continue to rely on its longstanding interpretation to allow the consolidation of CCR from CCR units operating within a multi-unit system, when the facility treats the system as a single unit for purposes of closure. Additionally, EPA should not arbitrarily assign limitations to the use of ash within a multi-unit system, especially when the placement of a volume of ash (small or large) into a single unit from multiple CCR units reduces the overall risk to human health and the environment, promotes the safe closure of the CCR unit(s) and expedites closure. EPA should also clarify that any restrictions imposed as part of this proposal do not apply to consolidation of ash within a single unit and the existing allowances for beneficial use in the existing rule still apply.

A. EPA Should Allow Multi-Unit Transfer of CCR under Previous Guidance and Must Not Restrict the Ability to Consolidate CCR for Purposes of Safely Expediting Closure.

In this proposal, EPA addresses situations that are not contemplated through this longstanding interpretation – that is, the addition of CCR or other wastes from locations *external* to the multi-unit system. As an example, under this proposal, CCR from a unit outside of the multi-unit system could be used for closure purposes within the multi-unit system under a certain limited set of conditions which EPA describes. However, EPA concludes in this proposal that specifically limiting the beneficial use of ash to purposes of grading and contouring for construction of the final cover system could be viewed as inconsistent with its longstanding interpretation to allow consolidation of CCR from CCR units operating within a multi-unit

system. Considering this perceived inconsistency, EPA is soliciting comment on two potential alternatives:

- Rely on its longstanding interpretation to allow the consolidation of CCR from CCR units operating within a multi-unit system, when the facility treats the system as a single unit for purposes of closure (i.e. all CCR units in the system closing); or
- Revise the regulations to explicitly clarify that only the use of CCR for purposes of grading and contouring is permitted.

Southern Company recommends that EPA continue to rely on its longstanding interpretation noted in the first bullet above. EPA's limitation to grading and contouring purposes should have no bearing on this longstanding interpretation. As USWAG explains in comments, the addition of ash for closure purposes from a source within or outside of a multi-unit system would not introduce additional environmental risk. It is also important to note that the industry has learned during closure projects that the use of bottom ash to stabilize an existing ash surface for roadways or other equipment accessways can be very beneficial for creating an overall safer work area. Therefore, EPA should not arbitrarily assign limitations to the use of ash within a multi-unit system, especially when the placement of a volume of ash (small or large) into a single CCR unit from multiple CCR units reduces the overall risk to human health and the environment, promotes the safe closure of the CCR unit(s) and expedites closure.

B. EPA Should Eliminate the Restrictive 5 Percent Slope Criteria or, at a Minimum, Allow up to 33 Percent.

EPA is proposing that the final cover system using CCR for grading and contouring be constructed at slopes no steeper than 5 percent, stating that "EPA has identified 5 percent to generally be the maximum necessary grade to promote positive drainage in a vegetated slope runoff, as steeper grades may lead to erosion and deterioration of the final cover system."[14] EPA should eliminate the restrictive 5 percent or, at a minimum, allow up to 33 percent for slopes.

The manual cited by EPA states, "To facilitate run-off while minimizing erosion, the surface of the compacted soil should have a minimum slope of 3 percent and a maximum slope

[14] 83 Fed. Reg. at 11,606.

of 5 percent after allowance for settlement. It is critical that side slopes, which are frequently greater than 5 percent, be evaluated for erosion potential."[15] This document was prepared to support state solid waste regulations, and the reference that side slopes are frequently steeper than 5 percent is supported by the fact that most state solid waste regulations allow for final grades as steep as 25 percent in most instances. Furthermore, a steeper grade could allow for a smaller footprint of the cover system, allowing for the removal of CCR from some portion of the surface impoundment around the perimeter of the closed-in-place footprint.

The 5 percent maximum grade could also cause complications for states that plan on utilizing their existing solid waste regulations as a guideline for CCR regulations. For example, existing Georgia regulations limit the final grade of cover systems for solid waste landfills to a minimum of 3 percent and a maximum of 33 percent.[16] Further, existing Alabama regulations limit the final grade of cover systems for solid waste landfills to a minimum of 5 percent and a maximum of 25 percent.[17] The recently approved Alabama state CCR rule similarly requires a final cover grade between 5 percent and 25 percent.[18] From a physical standpoint alone, it would be difficult to achieve a 5 percent slope due to natural settlement of even the most carefully constructed earth fill.

EPA does acknowledge in the proposed amendments that the Director of a participating state may approve a steeper than 5 percent grade in a permit if such a grade is necessary for proper function of the system. To support a steeper grade, EPA states that a stability analysis must be performed to evaluate possible erosion potential. However, we point out that a stability analysis does not directly evaluate erosion potential. Erosion potential is a function of such factors as slope steepness and length, material properties, and other factors. While there is a provision to allow for steeper slopes, EPA should not recommend a stability analysis to evaluate erosion potential.

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[15] EPA, Solid Waste Disposal Facility Criteria: Technical Manual, Doc. No. EPA530-R-93-017, at 324 (Nov. 1993) (as cited at 83 Fed. Reg. at 11,606 n. 42).

[16] Georgia Solid Waste Management Rule 391-3-4-.07(2)(i)6).

[17] ADEM Admin. Code r. 335-13-4-.20(2)(c).

[18] ADEM Admin. Code r. 335-13-15-.07(3)(d)3.

C. EPA Should Remove References to "Breaching" an Impoundment for Dewatering.

In the discussion about establishing a baseline geometric boundary, the preamble states, "As noted, under the existing regulations the owner must first breach and dewater the CCR unit, allowing for free drainage of water, sediment, or slurry out of the CCR surface impoundment via surface runoff, prior to construction of the final cover system."[19] However, there is no reference to breaching a dike to achieve dewatering in the existing regulations, nor are we aware of that as a common industry practice. To the contrary, no utility would intentionally breach a structurally sound CCR impoundment to achieve dewatering when other, more safe and effective measures are readily available.

IX. CONCLUSION

Southern Company appreciates the opportunity to offer comments in response to the Agency's proposed rule. We encourage EPA to act on state submissions and issue a final rule in this proceeding as expeditiously as possible.

[19] 83 Fed. Reg. at 11,606 n.40.